



# Alpha Chemika



ISO 9001 QUALITY SYSTEM CERTIFIED ORGANIZATION

## MATERIAL SAFETY DATA SHEET

### MSDS

Savgan Heights ; 102 ,B Wing ; R.T.O. Lane ,Andheri (West) Mumbai - 400053 , INDIA

## Section 1 - Chemical Product and Company Identification

### Product Name : m-PHENYLENEDIAMINE

**Synonyms :** 1,3-Benzenediamine, 1,3-Diaminobenzene

**CAS No.:** 108-45-2

**Molecular Weight:** 108.14

**Chemical Formula:** C<sub>6</sub>H<sub>8</sub>N<sub>2</sub>

## Section 2 - Composition, Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
m-Phenylenediamine	108-45-2	90 - 100%	Yes

## Section 3 - Hazardous Identification

### Risk advice to man and the environment

Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes. Possible risk of irreversible effects  
May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects  
in the aquatic environment.

## Section 4 - First Aid Measures

### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## Section 5 - Fire Fighting Measures

### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

## Section 6 - Accidental Release Measures

### **Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **Methods for cleaning up**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## Section 7 - Handling and Storage

### **Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

### **Storage**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Light sensitive. Store under inert gas. Air sensitive. May darken on storage

## Section 8 - Exposure Controls, Personal Protection

### **Personal protective equipment**

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Hand protection**

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

#### **Eye protection**

Face shield and safety glasses

#### **Skin and body protection**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### **Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## Section 9 - Physical and Chemical Properties

### **Appearance**

Form powder

Colour light grey

**Safety data**

pH no data available

Melting point 64 - 66 °C

61 - 65 °C

Boiling point 282 - 284 °C

Flash point 110 °C - closed cup

Ignition temperature 560 °C

Lower explosion limit no data available

Upper explosion limit no data available

Vapour pressure 0,83 hPa at 100 °C

Water solubility no data available

## Section 10 - Stability and Reactivity

**Storage stability**

Stable under recommended storage conditions.

**Materials to avoid**

acids, Acid chlorides, Acid anhydrides, Chloroformates, Strong oxidizing agents

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

## Section 11 - Toxicological Information

**Acute toxicity**

LD50 Oral - rat - 280 mg/kg

**Irritation and corrosion**

Eyes - rabbit - Severe eye irritation

**Sensitisation**

May cause allergic skin reaction.

**Chronic exposure**

Carcinogenicity - rat - Subcutaneous

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site of application.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (m-Phenylenediamine)

Genotoxicity in vitro - mouse - lymphocyte

Mutation in mammalian somatic cells.

Genotoxicity in vitro - Hamster - Embryo

Morphological transformation.

Genotoxicity in vivo - mouse - Oral

DNA inhibition

Genotoxicity in vivo - mouse - Intraperitoneal

Micronucleus test

Laboratory experiments have shown mutagenic effects.

Developmental Toxicity - rat - Intraperitoneal

Effects on Embryo or Fetus: Fetal death.

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Nausea, Dizziness, Headache, Dermatitis, Pulmonary edema. Effects may be delayed.,

Discoloration of the skin.

**Potential Health Effects**

**Inhalation** Toxic if inhaled. May cause respiratory tract irritation.

**Skin** Toxic if absorbed through skin. May cause skin irritation.

**Eyes** Causes eye irritation.

**Ingestion** Toxic if swallowed.

**Target Organs** Liver, Kidney, Bladder,

**Additional Information**

RTECS: SS7700000

## Section 12 - Ecological Information

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

no data available

### Further information on ecology

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## Section 13 - Disposal Considerations

### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

### Contaminated packaging

Dispose of as unused product.

## Section 14 - Transport Information

### ADR/RID

UN-Number: 1673 Class: 6.1 Packing group: III

Proper shipping name: PHENYLENEDIAMINES

### IMDG

UN-Number: 1673 Class: 6.1 Packing group: III EMS-No: F-A, S-A

Proper shipping name: PHENYLENEDIAMINES

Marine pollutant: No

### IATA

UN-Number: 1673 Class: 6.1 Packing group: III

Proper shipping name: Phenylenediamines

## Section 15 - Regulatory Information

### Labelling according to EC Directives

EC Label

Hazard symbols

T Toxic

N Dangerous for the environment

R-phrases

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R36 Irritating to eyes.

R68 Possible risk of irreversible effects.

R43 May cause sensitization by skin contact.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases

S28 After contact with skin, wash immediately with plenty of soap and water.

S36/37 Wear suitable protective clothing and gloves.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60 This material and its container must be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

## **Section 16 - Additional Information**

**Not Regulated**